

A high-speed photograph of water being poured from a glass pitcher into a clear glass. The water is captured mid-pour, creating a dynamic splash and ripples inside the glass. The background is a soft, light blue with subtle curved lines.

Presented By
City of New Brighton

ANNUAL
**WATER
QUALITY
REPORT**

WATER TESTING PERFORMED IN 2017

Quality First

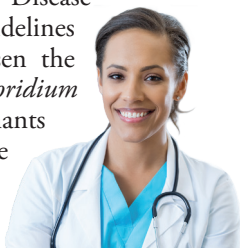
Once again, we are pleased to present our annual water quality report. As in years past, we are committed to delivering the best-quality drinking water possible. To that end, we remain vigilant in meeting the challenges of new regulations, source water protection, water conservation, and community outreach and education while continuing to serve the needs of all our water users. Thank you for allowing us the opportunity to serve you and your family.

We encourage you to share your thoughts with us on the information contained in this report. After all, well-informed customers are our best allies.

Water treatment is a complex, time-consuming process.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or <http://water.epa.gov/drink/hotline>.



New Brighton's Water Supply

In an ongoing effort to supply a safe and reliable source of drinking water, we would like to take this opportunity to inform you of our progress.

In February 2015, the City was notified by the Minnesota Department of Health that during a sampling event related to contaminants of emerging concern, the chemical 1,4-Dioxane was found in New Brighton's wells in small amounts.

1,4-Dioxane is a solvent stabilizer that may cause long-term effects on human health. In response, on April 15, 2015, the City ceased operating the affected wells (and Water Treatment Plant 1) and began operating its deeper, uncontaminated Mount Simon-Hinckley wells as its sole source of water.

In January 2016, the City completed a technology screening report that recommended two Advanced Oxidation Processes (AOP) be retained for pilot testing. Following rigorous tests, a treatability study report was prepared that recommended the City implement the Trojan UVPhox technology for removal of dioxane at Water Treatment Plant 1.

In July 2016, the City transitioned from its deep wells to a Minneapolis source via a newly constructed interconnection pipeline. New Brighton will remain on Minneapolis water until all improvements are completed at Water Treatment Plant 1 and the dioxane treatment equipment is operational.

In February 2018, the City received the Trojan UVPhox reactors and they are currently being installed. Soon, the contractors will be working on the exterior of the entire Water Treatment Plant, adding stone work and a rain screen to match the Distribution Control Station that is located on the property.

When the Water Treatment Plant is operational and the newly installed treatment system is tested out and proven to remove contaminants in the water, it is, at this point, when New Brighton will transition back to its own safe and reliable water.

Tap vs. Bottled

Thanks in part to aggressive marketing, the bottled water industry has successfully convinced us all that water purchased in bottles is a healthier alternative to tap water. However, according to a four-year study conducted by the Natural Resources Defense Council (NRDC), bottled water is not necessarily cleaner or safer than most tap water. In fact, about 25 percent of bottled water is actually just bottled tap water (40 percent according to government estimates).

The Food and Drug Administration is responsible for regulating bottled water, but these rules allow for less rigorous testing and purity standards than those required by the U.S. EPA for community tap water. For instance, the high mineral content of some bottled waters makes them unsuitable for babies and young children. Further, the FDA completely exempts bottled water that's packaged and sold within the same state, which accounts for about 70 percent of all bottled water sold in the United States.

People spend 10,000 times more per gallon for bottled water than they typically do for tap water. If you get your recommended eight glasses a day from bottled water, you could spend up to \$1,400 annually. The same amount of tap water would cost about 49 cents. Even if you installed a filter device on your tap, your annual expenditure would be far less than what you'd pay for bottled water.

For a detailed discussion on the NRDC study results, check out their website at <https://goo.gl/Jxb6xG>.

Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals, in some cases, radioactive material, and substances resulting from the presence of animals or from human activity. Substances that may be present in source water include:

Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;

Pesticides and Herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses;

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and may also come from gas stations, urban stormwater runoff, and septic systems;

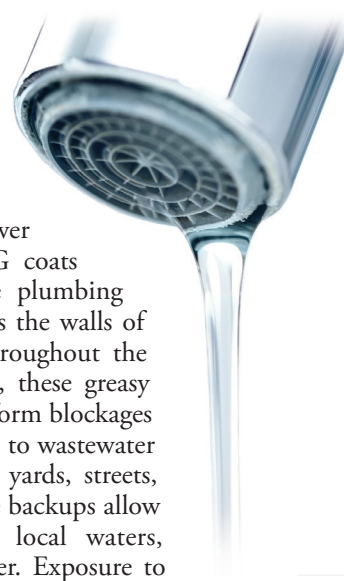
Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.



FOG (fats, oils, and grease)

You may not be aware of it, but every time you pour fat, oil, or grease (FOG) down your sink (e.g., bacon grease), you are contributing to a costly problem in the sewer collection system. FOG coats the inner walls of the plumbing in your house as well as the walls of underground piping throughout the community. Over time, these greasy materials build up and form blockages in pipes, which can lead to wastewater backing up into parks, yards, streets, and storm drains. These backups allow FOG to contaminate local waters, including drinking water. Exposure to untreated wastewater is a public health hazard. FOG discharged into septic systems and drain fields can also cause malfunctions, resulting in more frequent tank pump-outs and other expenses.



Communities spend billions of dollars every year to unplug or replace grease-blocked pipes, repair pump stations, and clean up costly and illegal wastewater spills. Here are some tips that you and your family can follow to help maintain a well-run system now and in the future:

NEVER:

- Pour fats, oil, or grease down the house or storm drains.
- Dispose of food scraps by flushing them.
- Use the toilet as a waste basket.

ALWAYS:

- Scrape and collect fat, oil, and grease into a waste container such as an empty coffee can, and dispose of it with your garbage.
- Place food scraps in waste containers or garbage bags for disposal with solid wastes.
- Place a wastebasket in each bathroom for solid wastes like disposable diapers, creams and lotions, and personal hygiene products including nonbiodegradable wipes.

QUESTIONS?

For more information about this report, or any questions relating to your drinking water, please call Jesse Hartman, Water Department Supervisor, at (651) 638-2114.

Lead in Home Plumbing

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. We are responsible for providing high-quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/lead.

Reducing Potential Lead Risks in Drinking Water

Although most households and businesses tested in New Brighton in 2018 have not experienced elevated lead levels, if present, sustained elevated levels of lead in drinking water can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with home service lines and home plumbing. The City does not have any lead service lines leading to residences or businesses, but lead used in some home plumbing components can present problems. The City is responsible for providing high-quality drinking water throughout its distribution system; however, it cannot control the variety of materials used in plumbing components inside of homes. In certain situations, some water characteristics can cause interactions with certain plumbing components, which will dissolve small amounts of lead. The risk associated with this lead typically can be reduced substantially by simply running the water (and thus flushing the pipes) for a short time before use.

What is Lead?

Lead is a naturally occurring metal that is harmful if inhaled or swallowed. Lead can be found in air, soil, dust, food, and water.

How Does Lead Get Into Drinking Water?

Lead may be present in various materials in a building's plumbing system, such as lead solder, brass fixtures, valves, and lead pipes. Corrosion of these materials allows lead to dissolve into the water passing through the household plumbing system. The amount of corrosion depends on the type of plumbing materials, water characteristics, electrical currents, and how the water is used. The longer water remains in contact with lead materials, the greater the chance lead can get into the water.



Why are We Seeing Some Elevated Lead Levels with Recent Samples?

Of the 63 household samples taken in March 2018, 13 were above the action level of 15 parts per billion (ppb). The majority of the other samples were less than 2 ppb, well below the action level.

Water chemistry is complex. Changes in certain water quality characteristics can cause higher levels of lead in homes that had previously tested lower. Since July 2016, New Brighton has used water provided by the City of Minneapolis, which is surface water. Before July 2016, New Brighton's water came from its ground water wells. The difference in water characteristics with this change could be capable of removing some of the naturally occurring mineral deposits that have formed over the years inside our homes' plumbing. This could expose plumbing connections or fixtures containing lead, making them more susceptible to corrosion.

What is New Brighton Doing to Respond to This?

New Brighton has been proactive in minimizing lead exposure risk. Anticipating the potential for increased lead and copper levels with the source water change in 2016, the MDH increased its lead and copper monitoring schedule and the quantity of samples required during each sampling event. The City has also worked independently to sample for lead and copper.

In preparation for the source water change in 2016, the City met with MDH and City of Minneapolis officials to discuss potential water quality changes associated with the switchover. MDH recommended that New Brighton begin injecting a corrosion prevention substance (orthophosphate) into its water supply for two months prior to the switchover. The purpose of this preventive substance is to form a thin protective coating on the interior of the City's distribution lines and household plumbing systems to minimize corrosion. This is the same substance that Minneapolis uses for corrosion control in its system. The City has continued to inject orthophosphate through the present day, and will continue to do so throughout the switchover back to ground water.

continued on the next page

What can I do?

When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. You will feel the water turn colder to the touch and know that you are now drawing fresh water from the public water main. Some additional control measures include:

- Use only cold water for drinking or cooking.
- Install a point-of-use device, such as a Brita filter on the kitchen faucet.
- Replace any old kitchen or bathroom faucets that may contain lead.
- Remove any plumbing within the home that serves as a drinking water source and that you suspect may contain excess lead solder.
- Install a point-of-use filter (capable of lead removal or rated for lead removal) on all faucets from which drinking water is drawn. Note that your refrigerator filter or other existing point-of-use filter may be providing lead control, if listed for that purpose and properly maintained.

What about testing for lead in your drinking water?

In most cases, letting the water run for a couple of minutes and using cold water for drinking and cooking will keep lead levels low or undetectable in your drinking water. If you are still concerned about lead and would like to test your water, a certified laboratory can perform this test. The following MDH website can help you locate a certified lab to get a sample container and instructions on how to submit a sample: <https://eldo.web.health.state.mn.us/public/accruitedlabs/labsearch.seam> Generally, these tests will cost about \$20 - \$30.

Where can I find more information about lead?

<http://www.health.state.mn.us/topics/lead/index.html>

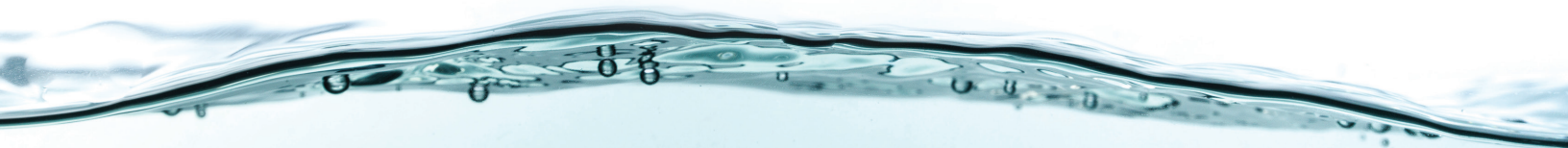
<https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water>

New Brighton Public Works, Water Department

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Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule. The information in the data tables shows only those substances that were detected between January 1 and December 31, 2017. Remember that detecting a substance does not necessarily mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels. The State recommends monitoring for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

Sampling for lead in 2017 is indicated in the included table. Early 2018 samples have shown a slight increase but is not included in the table. Please review the information here as well as other information pertaining to lead that you may have already received or will in the future.

The percentage of Total Organic Carbon (TOC) removal was measured each month. The system met all TOC removal requirements, unless there is a “YES” in the Violation column.

REGULATED SUBSTANCES									
				City of New Brighton		City of Minneapolis			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Carbon Tetrachloride ¹ (ppb)	2017	5	0	NA	NA	NA	- 0.2	No	Discharge from chemical plants and other industrial activities
Chloramines (ppm)	2017	[4]	[4]	1.52	0.99–1.78	3.14	2.70–3.60	No	Water additive used to control microbes
Fluoride (ppm)	2017	4	4	0.67	0.63–0.70	0.7	0.64–0.70	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAA] (ppb)	2017	60	NA	36.8	11.4–58.6	26.3	0.00–36.4	No	By-product of drinking water disinfection
Nitrate (ppm)	2017	10	10	NA	NA	NA	- 0.41	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [Total Trihalomethanes] (ppb)	2017	80	NA	27.2	7.1–52.9	23.5	6.70–34.40	No	By-product of drinking water disinfection
Turbidity ² (NTU)	2017	TT	NA	NA	NA	0.19	NA	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2017	TT = 95% of samples meet the limit	NA	NA	NA	100	NA	No	Soil runoff

Definitions

AL (Action Level): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

LRAA (Locational Running Annual Average): The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters. Amount Detected values for TTHMs and HAAs are reported as the highest LRAAs.

MCL (Maximum Contaminant Level): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG (Maximum Contaminant Level Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

MRDL (Maximum Residual Disinfectant Level): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG (Maximum Residual Disinfectant Level Goal): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

NA: Not applicable

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

TT (Treatment Technique): A required process intended to reduce the level of a contaminant in drinking water.

Tap water samples were collected for lead and copper analyses from sample sites throughout the community									
				City of New Brighton		City of Minneapolis			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/TOTAL SITES	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2017	1.3	1.3	0.07	0/67	0.08 ³	0/54 ³	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2017	15	0	11.4	6/67	1.6 ³	0/54 ³	No	Corrosion of household plumbing systems; Erosion of natural deposits

¹ Follow-up sampling showed that no contamination was present.

² Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system.

³ Sampled in 2015.